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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/539,637	03/30/2000	Fong-Shek Lam	10559/170001/P8263	8485

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EXAMINER	
WALLACE, SCOTT A	

ART UNIT	PAPER NUMBER
2671	21

DATE MAILED: 07/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/539,637	Applicant(s) LAM ET AL.	
	Examiner Scott Wallace	Art Unit 2671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 May 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-9,11-16,18 and 20-22* is/are rejected.

7)☒ Claim(s) *2,10,17,19 and 23* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Arguments

1. Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 3-9, 11-16, 18, 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perlman, U.S. Patent No. 5,043,714 in view of Hayek et al., U.S. Patent No. 6,044,419.

4. As per claims 1 and 22, Perlman discloses a line buffer to store up to a full line of video overlay data (column 2 lines 14-16 and column 22 lines 13-20); reading pixel data for a current video line from the line buffer (column 2 lines 14-16). However, Perlman does not disclose setting an indicator in a line buffer, determining when the pixel data reaches the indicator, and loading data for the next video line into the line buffer based on the determining when the pixel data reaches the indicator. This is disclosed in Hayek et al in column 2 lines 60-67 and column 3 lines 3-35. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use an indicator as in Hayek et al with the system of Perlman because this would provide a continuous flow of data (Perlman, column 2 lines 14-16 and Hayek column 3 lines 24-35).

5. As per claim 3, Perlman does not disclose wherein loading a first portion of the data for the next video line when the pixel data reaches the indicator; and loading a second portion of the data for the next video line when the pixel data reaches the end of the line buffer. This is disclosed in Hayek et al in

column 2 lines 60-67 and column 3 lines 3-35. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Perlman this way because this would provide a continuous flow of data (Perlman, column 2 lines 14-16 and Hayek column 3 lines 24-35).

6. As per claim 4, Perlman disclose further processing the current video line data for display (column 2 lines 14-16).

7. As per claim 5, Perlman discloses displaying the processed video line data (column 2 lines 25-36).

8. As per claim 6, Perlman discloses creating a video overlay from the processed video line data (column 2 lines 14-16 and column 22 lines 13-20).

9. As per claim 7, Perlman discloses positioning the pixel data on an active display to create a video overlay (column 22 lines 13-20).

10. As per claim 8, Perlman discloses a method for processing video overlay data (column 2 lines 14-16 and column 22 lines 13-20) comprising: reading video overlay data for a current video line from a line buffer (column 2 lines 14-16 and column 22 lines 13-20), the line buffer to store up to a full line of the video overlay data (column 2 lines 14-16 and column 22 lines 13-20). However, Perlman does not disclose detecting the position in the line buffer where the video data is located; loading data for the next video line into the line buffer when the video data for the current video line is located at a predetermined position. This is disclosed in Hayek et al in column 2 lines 60-67 and column 3 lines 3-35. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use an indicator as in Hayek et al with the system of Perlman because this would provide a continuous flow of data (Perlman, column 2 lines 14-16 and Hayek column 3 lines 24-35).

11. As per claim 9, Perlman does not disclose setting the predetermined position at a position before all the current line of video overlay data is read. This is disclosed in Hayek et al in column 2 lines 60-67 and column 3 lines 3-35. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use an indicator as in Hayek et al with the system of Perlman because this would provide a continuous flow of data (Perlman, column 2 lines 14-16 and Hayek column 3 lines 24-35).

12. As per claim 11, Perlman does not disclose wherein loading a first portion of the data for the next video line when the pixel data reaches the indicator; and loading a second portion of the data for the next video line when the pixel data reaches the end of the line buffer. This is disclosed in Hayek et al in column 2 lines 60-67 and column 3 lines 3-35. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Perlman this way because this would provide a continuous flow of data (Perlman, column 2 lines 14-16 and Hayek column 3 lines 24-35).

13. As per claim 12, Perlman disclose further processing the current video line data for display (column 2 lines 14-16).

14. As per claim 13, Perlman discloses displaying the processed video line data (column 2 lines 25-36).

15. As per claim 14, Perlman discloses a overlay (column 22 lines 13-20) display processor comprising: a line buffer to store up to a full line of video overlay data (column 2 lines 14-16 and column 22 lines 13-20), the line buffer having a plurality of memory locations (fig 6 and column 2 lines 25-35), the line buffer adapted to provide data to a display (column 2 lines 14-16). However, Perlman does not disclose an indicator positioned at a predetermined memory location in the line buffer, wherein the line buffer begins to read data for a next video data line when the line buffer provides data from the indicator memory location. This is disclosed in Hayek et al in column 2 lines 60-67 and column 3 lines 3-35. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use an indicator as in Hayek et al with the system of Perlman because this would provide a continuous flow of data (Perlman, column 2 lines 14-16 and Hayek column 3 lines 24-35).

16. As per claim 15, Perlman discloses graphic memory which provides the video pixel data to the line buffer (fig 5); a pixel processing engine to determine whether data for a current video line has been read from the predetermined memory location in the line buffer, the pixel processing engine further to subsequently load a first portion of data for the next video line into the line buffer (column 2 lines 14-35).

17. As per claim 16, Perlman discloses wherein the line buffer provides data to the display for a current video line (column 2lines 14-16).

18. As per claim 18, Perlman discloses a overlay (column 22 lines 13-20) display system comprising: a video memory which stores video data (column fig 5 and column 2 lines 14-35); an overlay (column 22 lines 13-20) processing engine comprising: a line buffer to store up to a full line of video overlay data (column 2 lines 14-16), the line buffer to receive the video overlay data from the video memory (fig 5 and column 2 lines 14-35), video processing circuitry to prepare the video overlay data in the line buffer to be displayed (column 2 lines 14-16); and a display to receive the processed data from the overlay processing engine (column 2 lines 14-16), wherein the line buffer is to read data for a next video data line when the line buffer provides a predetermined amount of data to the display for a current video data line (column 2 lines 14-35). However, Perlman does not disclose wherin said line buffer includes an indicator positioned at a predetermined memory location in the line buffer. This is disclosed in Hayek et al in column 2 lines 60-67 and column 3 lines 3-35. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use an indicator as in Hayek et al with the system of Perlman because this would provide a continuous flow of data (Perlman, column 2 lines 14-16 and Hayek column 3 lines 24-35).

19. As per claim 20, Perlman discloses wherein the overlay processing engine provides data to the display to create a video overlay (column 22 lines 13-20).

20. As per claim 21, Perlman does not disclose wherein the video processing circuitry includes pixel color conversion and adjustment. This is disclosed in Hayek et al in column 1 lines 15-56. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a color conversion with the system of Perlman because this permit the overlay to be shown in all colors (column 1 lines 45-47).

Allowable Subject Matter

21. Claims 2, 10, 17, 19, 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Wallace whose telephone number is 703-605-5163. The examiner can normally be reached on Monday thru Friday from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Zimmerman, can be reached on 703-305-9798. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from

either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MARK ZIMMERMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600